

EXAMINER

Docket No.: RLL-256.3CIPUS Serial No.: 10/552,455

Applicants: SALMAN et al.

Filed: 10/7/2005

Group:

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	2,490,714	12/6/1949	Searle	260 \	239	
	A2	3,176,019	3/30/1965	Campbell et al.	260	293.4	
	А3	5,001,160	3/19/1991	McPherson et al.	514	255	
	A4	5,164,402	11/17/1992	Brighty	514	300	
	A5	5,281,601	1/25/1994	Cross et al.	514	320	
	A6	5,397,800	3/14/1995	Alker et al.	514	413	
	A7	5,948,792	9/7/1999	Tsuchiya et al.	514	317	
	A8	6,130,232	10/10/2000	Mase et al.	514	318	
,	A9	6,174,900	1/16/2001	Okada et al.	514	317	
	A10	6,313,312	11/6/2001	Banks et al.	548	452	
	A11	5,179,108	1/12/1993	George et al.	514	319	
	A12	2003/0105071	6/5/2003	Cuny et al.	514	210.2	
	A13	2003/0162780	8/28/2003	Brotherton-Pleiss et al.	514	235.5	
	A14	2003/0171362	9/11/2003	Madera et al.	514	218	
	A15	7,232,835	6/19/2007	Mehta et al.	514	323	
FOREIGN PATENT DOCUMENTS					•		
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	B1	CA 2155320	8/19/1993	Canada	C07D	211/68	
<u>-</u>	B2	EP 0 325 571	7/26/1989	EPO	C07C	215/54	

 	0/12/100020	0, 10, 1000) diad	<u></u>	211/00
B2	EP 0 325 571	7/26/1989	EPO	C07C	215/54
В3	EP 0 388 054	9/19/1990	EPO	C07D	207/08
B4	EP 0 413 455	2/20/1991	EPO	C07D	401/04
B5	EP 0 613 232	8/31/1994	EPO	H02M	3/335
B6	EP 0 801 067	10/15/1997	EPO	C07D	453/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DATE CONSIDERED

Docket No.: RLL-256.3CIPUS Serial No.: 10/552,455

Applicants: SALMAN et al.

Filed: 10/7/2005

Group:

В7	EP 0 823 423	2/11/1998	EPO	C07D	211/46
В8	EP 0 863 141	9/9/1998	EPO	C07D	401/06
В9	GB 940,540	10/30/1963	UK	C07C	
B10	JP 135958/1994	5/17/1994	Japan	C07D	333/16
B11	JP 92921/1994	4/5/1994	Japan	C07C	237/20
B12	WO 91/09013	6/27/1991	PCT	C07D	207/08
B13	WO 93/16018	8/19/1993	PCT	C05F	17/02
B14	WO 93/16048	8/19/1993	PCT	C07D	211/26
B15	WO 96/33973	10/31/1996	PCT	C07D	211/46
B16	WO 97/45414	12/4/1997	PCT	C07D	211/58
B17	WO 98/05641	2/12/1998	PCT	C07D_	211/46
B18	WO 98/29402	7/9/1998	PCT	C07D	311/20
B19	WO 98/53814	12/3/1998	PCT	A61K	31/395
B20	WO 01/42212	6/14/2001	PCT	C07D	211/48
B21	WO 01/42213	6/14/2001	PCT	C07D	211/58
B22	WO 01/90081	11/29/2001	PCT	C07D	241/08
B23	WO 02/00652	1/3/2002	PCT	C07D	453/02
B24	WO 02/04402	1/17/2002	PCT	C07C	219/10
B25	WO 02/51841	7/4/2002	PCT	C07D	453/02
B26	WO 02/06241	1/24/2002	PCT	C07D	223/16
B27	WO 02/53564	7/11/2002	PCT	C07D	453/02
B28	WO 04/004629	1/15/2004	PCT	A61K	
B29	WO 04/005252	1/15/2004	PCT	C07D	209/52
B30	WO 04/014363	2/19/2004	PCT	A61K	31/40
B31	WO 04/014853	2/19/2004	PCT	C07D	209/02
B32	WO 04/018422	3/4/2004	PCT	C07D	209/52
B33	WO 04/052857	6/24/2004	PCT	C07D	209/52

EXAMINER DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No.: RLL-256.3CIPUS Serial No.: 10/552,455

Group:

Applicants: SALMAN et al.

Filed: 10/7/2005

B34	WO 04/056767	7/8/2004	PCT	C07D	207/14	
B35	WO 04/056810	7/8/2004	PCT	C07D	405/12	
B36	WO 04/056811	7/8/2004	PCT	C07D	405/12	
B37	WO 04/089900	10/21/2004	PCT	C07D	209/52	
B38	WO 99/43657	9/2/1999	PCT	C07D	211/26	
B39	WO 01/47893	7/5/2001	PCT	C07D	221/24	
B40	WO 01/090082	11/29/2001	PCT	C07D	241/08	
B41	WO 03/033495	4/24/2003	PCT	C07D	453/02	
B42	WO 03/048124	6/12/2003	PCT	C07D	211/26	
B43	WO 03/048125	6/12/2003	PCT	C07D	211/58	
B44	WO 04/067510	8/12/2004	PCT	C07D	209/52	
B45	WO 04/069835	8/19/2004	PCT	C07D	471/08	
B46	WO 04/089363	10/21/2004	PCT	A61K	31/403	
B47	WO 04/089898	10/21/2004	PCT	C07D	209/52	
B48	WO 04/089899	10/21/2004	PCT	C07D	209/52	
B49	WO 2005/092341	10/6/2005	PCT	A61K	31/496	
B50	WO 2005/003587	1/12/2006	PCT	A61K	9/16	
B51	WO 2006/035282	4/6/2006	PCT	A61K	31/439	
B52	WO 2006/064304	6/22/2006	PCT	C07D	209/52	
	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
C1	de Groat and Yoshimura, "Pharmacology of the Lower Urinary Tract", <i>Annual Review of Pharmacology and Toxicology</i> , 41:691-721 (2001)					
C2	Cheng and Prusoff, "Relationship between the inhibition constant (K_1) and the					

EXAMINER	DATE CONSIDERED

reaction", Biochemical Pharmacology, 22:3099-3108 (1973)

Sciences, 22(5):215-219 (2001)

concentration of inhibitor which causes 50 per cent inhibition (I_{50}) of an enzymatic

Birdsall et al., "Muscarinic receptors: it's a knockout", Trends in Pharmacological

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

C3

Docket No.: RLL-256.3CIPUS Serial No.: 10/552,455

Applicants: SALMAN et al.

Filed: 10/7/2005 Group:

C4	Brighty et al., "Synthesis of $(1\alpha,5\alpha,6\alpha)$ -6-Amino-3-azabicyclo[3.1.0]hexane, a Novel Achiral Diamine", <i>Synlett</i> , 1097-1099 (1996)
C5	Braish et al., "Construction of the $(1\alpha,5\alpha,6\alpha)$ -6-Amino-3-azabicyclo[3.1.0]hexane Ring System", Synlett, 1100-1102 (1996)
C6	Chapple, "Muscarinic receptor antagonists in the treatment of overactive bladder", <i>Urology</i> , <u>55</u> (Suppl. 5A):33-46 (2000)
C7	Eglen et al., "Muscarinic receptor ligands and their theraputic potential", Current Opinion in Chemical Biology, 3:426-432 (1999)
C8	Eglen et al., "Theraputic opportunities from muscarinic receptor research", <i>Trends in Pharmacological Sciences</i> , 22(8):409-414 (2001)
C9	Felder et al., "Theraputic Opportunities for Muscarinic Receptors in the Central Nervous System", <i>Journal of Medicinal Chemistry</i> , 43(23):4333-4353 (2000)
C10	Grover et al., "Chiral Mandelic Acid Template Provides a Highly Practical Solution for (S)-Oxybutynin Synthesis", <i>Journal of Organic Chemistry</i> , 65:6283-6287 (2000)
C11	Shacklett and Smith, "The Preparation of Substituted Benzilic Acids", <i>Journal of the American Chemical Society</i> , 75:2654-2657 (1953)
C12	Sagara et al., "Cyclohexylmethylpiperidinyltriphenylpropioamide: A Selective Muscarinic M ₃ Antagonist Discriminating against the Other Receptor Subtypes", <i>Journal of Medicinal Chemistry</i> , 45:984-987 (2002)
C13	Nkpa and Chedekel, "Mechanistic Studies on the Addition of Cysteine to 3,4- Dihydroxyphenylalanine", <i>Journal of Organic Chemistry</i> , 46:213-215 (1981)
C14	Vadia and Connon "Fators of M Mathyl 2 hydrogonia siding Having Daysh at a sign of
C15	Broadley and Kelly, "Muscarinic Receptor Agonists and Antagonists", <i>Molecules</i> , <u>6</u> :142-193 (2001)
C16	Moriya et al., "Affinity Profiles of Various Muscarinic Antagonists for Cloned Human Muscarinic Acetylcholine Receptor (mAChR) Subtypes and mAChRs in Rat Heart and Submandibular Gland", <i>Life Sciences</i> , 64(25):2351-2358 (1999)
C17	Kubo et al., "Cloning, sequencing and expression of complementary DNA encoding the muscarinic acetylcholine receptor", <i>Nature</i> , 323(2):411-416 (1986)
C18	Bonner et al., "Identification of a Family of Muscarinic Acetylcholine Receptor Genes", <i>Science</i> , 237:527-531 (1987)
C19	Steers, "The future direction of neuro-urology drug research", Current Opinion in CPNS Investigational Drugs, 2(3):268-282
C20	Steers, Barrot, Wein, "Voiding dysfunction: diagnosis classification and management", In: Adult and Pediatric Urology, ed. Gillenwater, Grayhack, Howards, Duckett. Mosby, St. Louis, MO; 1220-1325, 3rd edition (1996)

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

. . .

Docket No.: RLL-256.3CIPUS Serial No.: 10/552,455

Applicants: SALMAN et al.

Filed: 10/7/2005

Group:

C21	Weinstock et al., "A General, One-Step Synthesis of α -keto Esters", Synthetic Communications, 11(12):943-946 (1981)
C22	Vogel's textbook, "Practical Organic Chemistry" 1046-1047 (5th Ed.)
C23	"Design of prodrugs", ed. H. Bundgaard, Elsevier (1985)
C24	Kaiser et al, "Synthesis and Antimuscarinic Activity of Some 1-Cycloalkyl-1-hydroxy-1-phenyl-3-(4-substituted piperazinyl)-2-propanones and Related Compounds", <i>Journal of Medicinal Chemistry</i> , 36(5):610-616 (1993)
C25	Carter et al, "Analogues of Oxybutynin. Synthesis and Antimuscarinic and Bladder Activity of Some Substituted 7-Amino-1-hydroxy-5-heptyn-2-ones and Related Compounds", <i>Journal of Medicinal Chemistry</i> , 34(10):3065-3074 (1991)
C26	Morissette et al, "High-throughput crystallization: polymorphs, salts, co-crystals and solvates of pharmaceutical solids", <i>Advanced Drug Delivery Reviews</i> , <u>56</u> :275-300 (2004)

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.